

## Amendments to the Claims

- 1 (currently amended) A method for planning administration of a substance into a patient, comprising the steps of:
  - capturing patient data; ~~and~~
  - prior to positioning an infusion ~~or withdrawal~~ catheter in a body of the patient, using said patient data to plan an infusion of the substance into the patient, ~~said using including:~~
  - performing a simulation of ~~the~~ a planned infusion to obtain simulation data corresponding to a distribution of the substance within the patient;
  - determining from the simulation data if a desired infusion plan for administration of the substance into the patient can be obtained; and
  - if the determining step determines a desired substance distribution can be obtained, using a navigation system to position the infusion catheter in the body of the patient as specified by the infusion plan.
- 2 (canceled)
- 3 (currently amended) The method as set forth in claim 1 2, wherein said infusion catheter ~~device~~ is positioned on the patient with respect to the infusion location and/or to the depth of penetration as set forth in the plan.
- 4 (previously presented) The method as set forth in claim 1, wherein said patient data are captured by a magnetic resonance method (MRI), a computer tomography method (CT), an x-ray method or an ultrasound method.
5. (previously presented) The method as set forth in claim 1, wherein patient parameters are obtained from said captured patient data and are used for planning said infusion.
6. (original) The method as set forth in claim 5, wherein information on the tissue structure, tissue density, blood flow and/or metabolic properties of said tissue is used as said patient parameters.

7 (previously presented) The method as set forth in claim 1, wherein parameters of said substance, defining chemical, biological and/or physical properties of said substance, are used for planning said infusion.

8 (previously presented) The method as set forth in claim 1, wherein catheter parameters are used for planning said infusion.

9 (previously presented) The method as set forth in claim 1, wherein the distribution of said substance is simulated based on patient parameters obtained from said captured patient data, catheter parameters and parameters of said substance.

10. (previously presented) The method as set forth in claim 1, wherein a target volume and/or a distribution of the substance in the patient is pre-set, and catheter parameters and parameters of said substance are based on the preset target volume and preset distribution.

11. (previously presented) A computer program embodied on a computer readable medium which may be loaded in the memory of a computer, and includes sections of software code with which the steps in accordance with claim 1 may be performed when said program is running on a computer.

12. (canceled)

13. (currently amended) A device for planning administration of a substance into a patient, comprising:

~~a patient data capturing system configured to capture patient data; and~~  
a computer system configured to use patient data captured from a patient data capturing system to plan, prior to positioning an infusion or withdrawal catheter in a body of the patient, an infusion of the substance into the patient based on the patient data, catheter parameters and/or parameters of the substance, and to simulate the planned infusion to obtain simulation data corresponding to a distribution of the substance within the patient, wherein the simulation data is used to determine if a desired infusion plan can be obtained for maximizing

the quantity of the substance administered to a target tissue volume of the patient while minimizing the delivery of the substance to non-target tissue; and  
a navigation system for positioning the infusion catheter based on said desired plan.

14. (canceled)

15. (currently amended) A method for carrying out an infusion, comprising the steps of:  
planning said infusion prior to positioning an infusion ~~or withdrawal~~ catheter in a body of a patient; ~~said planning including~~  
performing a simulation of ~~the~~ a planned infusion to obtain simulation data corresponding to a distribution of the substance within the patient;  
determining from the simulation data if a defined quantity of the substance is administered to a target tissue volume of the patient while minimizing the delivery of the substance to non-target tissue;  
if the determining step indicates an acceptable result, using a navigation system to position the infusion catheter in the body of the patient as specified by the planned infusion; and  
executing the planned infusion.

16. (previously presented) The infusion method as set forth in claim 15, wherein said infusion is planned in accordance with a method wherein patient data are captured and the infusion to be carried out is planned using said patient data.

17. (previously presented) The method as set forth in claim 15, wherein actual infusion data are compared with the planned infusion data.

18. (previously presented) The method as set forth in claim 17, wherein deviations between said planned infusion data and said actual infusion data are determined.

19. (currently amended) The method as set forth in claim 18, wherein the infusion parameters are corrected~~[[;]]~~ based on said determined deviations.

20. (previously presented) A computer program embodied on a computer readable medium which may be loaded in the memory of a computer, and includes sections of software code with which the steps in accordance with claim 15 may be performed when said program is running on a computer.

21. (canceled)

22. (canceled)

23. (canceled)

24. (currently amended) The method as set forth in claim 1, further comprising: comparing the simulation to a desired result; and adjusting the plan based on the comparison.

25. (previously presented) The method as set forth in claim 24, wherein comparing includes comparing at least one of a desired concentration of the substance in a target tissue volume relative to a simulated concentration of the substance in the target tissue volume, or a desired concentration of the substance in a non-target tissue volume relative to a simulated concentration of the substance in the non-target tissue volume.